CLAIM AMENDMENTS

Please cancel claims 1-7, 9, and 14-16.

Please amend claims 8 and 17 as follows.

Claims 1. - 7. (Canceled).

8. (Currently Amended) An apparatus, comprising:

a laser to emit an optical beam;

a photodiode coupled to receive the optical beam from the laser and to convert the optical beam to a current;

circuitry coupled to receive the current from the photodiode, the circuitry to adjust an amount of light coupled into an optical fiber in response to a change in temperature affecting the optical fiber different from the laser, the circuitry including:

a first resistor having a first terminal and a second terminal, the first terminal coupled to receive the current from the photodiode;

a thermistor having a first terminal coupled to the first terminal of the first resistor and a second terminal ~~coupled~~ connected to the second terminal of the first resistor; and

a second resistor having a first terminal and a second terminal, the first terminal coupled to the second terminal of the first resistor and connected to the second terminal of the thermistor, wherein a current through the thermistor is to adjust in response to a change in temperature; and

a third resistor having a first terminal and a second terminal, the first terminal coupled to the first terminal of the thermistor and the first terminal of the first resistor; the second terminal coupled to the second terminal of the thermistor, the second terminal of the first resistor, and the first terminal of the second resistor, the third resistor to adjust the temperature slope of the thermistor; and

second circuitry coupled to receive the adjusted current and to provide the adjusted current to the laser to adjust power in the optical beam emitted by the laser.

9.   (Canceled).

10.   (Original) The apparatus of claim 9, wherein the second circuitry comprises:

a current gain device having a first input and a second input; and

a digital-to-analog converter having an output coupled to the first input,

the thermistor network coupled to the second input.

11.   (Original) The apparatus of claim 10, wherein the thermistor network has a negative temperature coefficient.

12.   (Original) The apparatus of claim 10, wherein the laser is an un-cooled distributed feedback (DFB) laser.

13.   (Original) The apparatus of claim 10, wherein the laser is an un-cooled vertical cavity surface emitting laser (VCSEL) laser.

Claims 14. -16.   (Canceled).

17.   (Currently Amended) An apparatus, comprising:

a laser to emit an optical beam, the laser having at least one input and at least one output;

a photodiode having an input coupled to one output of the laser, the photodiode to convert the optical beam to a current; and

circuitry coupled to receive the current from the photodiode, the circuitry to adjust an amount of light coupled into an optical fiber in response to a change in temperature affecting the optical fiber different from the laser, the photodiode having a first node coupled to a voltage source, the circuitry including:

a first resistor having a first node coupled to a second node of the photodiode;

a thermistor having a first node coupled to the first node of the first resistor and a second node connected to the second node of the photodiode;

an integrator having an input coupled to a second node of the thermistor and the second node of the resistor;

a digital-to-analog converter having an input coupled to an output of the integrator;

a current gain device having an input coupled an output of the digital-to-analog converter, wherein an output of the digital-to-analog converter is coupled to an input of the laser.

18.   (Previously Presented) The apparatus of claim 17, wherein the thermistor network has a negative or a positive temperature coefficient.

19.   (Previously Presented) The apparatus of claim 17, wherein the integrator, digital-to-analog converter, and current gain device are located on the same chip.

20.   (Previously Presented) The apparatus of claim 17, wherein the current gain device is one of a field effect transistor (FET) or bipolar transistor (BJT)